REMARKS

This is a full and timely response to the non-final Official Action mailed **December 12, 2007** (the "Office Action" or "Action"). Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

Claim Status:

Under a previous Restriction Requirement, claims 2-5, 8-9, 12-13, and 16-57 were withdrawn from consideration. Applicant will be entitled to rejoinder of at least some of these withdrawn claims upon the allowance of, for example, claim 1. *See* MPEP § 821.04

By the present amendment, claim 1 has been amended. However, this amendment is made merely to clarify the grammatical structure of claim 1 and is not intended to change or narrow the scope of the claim in any degree. To the contrary, the amendment is intended to ensure that claim 1 receives a broader interpretation consistent with the full scope of Applicant's invention.

Claims 1, 6, 7, 10, 11, 14 and 15 are now pending for further action.

Double Patenting:

The recent Office Action rejected claims 1, 6, 7, 10, 11, 14 and 15 on the grounds of non-statutory, obviousness-type double patenting in view of various claims of U.S. Patent No. 7,242,039 and, provisionally, in view of various claims of co-pending U.S. Patent Application No. 10/799,838. While the Applicant does not necessarily agree with the merits of this rejection, to expedite the allowance of this application, the Applicant has filed herewith a terminal disclaimer of the present application with respect to U.S. Patent No. 7,242,039 and U.S. Patent Application No. 10/799,838. Following entry of this terminal disclaimer into the

record, the double patenting rejection of claims 1, 6, 7, 10, 11, 14 and 15 may be reconsidered and withdrawn.

Prior Art:

With respect to the prior art, claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 4,641, 167 to Nishizawa ("Nishizawa"). Applicant notes that this rejection should have been made under 35 U.S.C. § 102(b), rather than (e). In any event, this rejection should be reconsidered and withdrawn for at least the following reasons.

Claim 1 recites:

> A semiconductor device, comprising:
> a drain electrode;
> a source electrode;
> a channel contacting the drain electrode and the source electrode, *wherein the channel includes one or more of a metal oxide including zinc-germanium, zinc-lead, cadmium-germanium, cadmium-tin, or cadmium-lead*; and
> a gate dielectric positioned between a gate electrode and the channel.

(Emphasis added).

Applicant notes that claim 1 recites a semiconductor device in which the channel includes at least one or more *metal oxide*, where the metal oxide can include any of "zinc-germanium, zinc-lead, cadmium-germanium, cadmium-tin, or cadmium-lead." Applicant's specification supports this subject matter by stating the following. "Exemplary embodiments include semiconductor devices that contain a multicomponent channel including ... a two-component oxide formed of a zinc-germanium oxide, zinc-lead oxide, cadmium-germanium oxide, cadmium-tin oxide, cadmium-lead oxide." (Applicant's specification, p. 1, line 29 to p. 2, line 4).

In contrast, Nishizawa does not teach or suggest this subject matter. The recent Office Action cited to Nishizawa at col. 3, lines 13-23. (Action, p. 3). This portion of Nishizawa states the following.

> Those regions of the layer 2 and 4 which will form the channel are doped with an impurity atom which is excited by infrared or far infrared light. The hatched region 9 indicates that region. The region to be doped with the impurity element which is excited by the infrared or far infrared light is selected in accordance with the region of wavelength of light to be detected, and the thickness of the region to be doped may be about the penetration depth of the infrared or far infrared light. Such an impurity element may preferably be gold, mercury, zinc or the like in the case of a germanium substrate and gold or the like in the case of a silicon substrate.

(Nishizawa, col. 3, lines 13-23).

Thus, Nishizawa teaches a channel region formed in a germanium or silicon substrate that is doped with an impurity such as gold, mercury, zinc or the like.

However, Nishizawa clearly does not teach, suggest or even mention a metal ***oxide*** used to form the channel. For example, doping a germanium substrate with zinc does not produce a zinc-germanium ***oxide*** as recited as one of the options in claim 1. Consequently, when claim 1 is properly understood, it is clear that Nishizawa fails to teach or suggest the claimed channel as recited in claim 1.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. In the present case, Nishizawa fails to teach or suggest the claimed semiconductor device with a channel that "includes one or more of a metal oxide including zinc-germanium, zinc-lead, cadmium-germanium, cadmium-tin, or cadmium-lead." Therefore, for at least the reasons explained here, the rejection based on Nishizawa of claim 1 and its dependent claims should be reconsidered and withdrawn.

No rejection based on prior art was made as to any claim other than claim 1.

Conclusion:

In view of the foregoing arguments, all claims are believed to be in condition for allowance over the prior art of record. Therefore, this response is believed to be a complete response to the Office Action. However, Applicant reserves the right to set forth further arguments in future papers supporting the patentability of any of the claims, including the separate patentability of the dependent claims not explicitly addressed herein. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed.

The absence of a reply to a specific rejection, issue or comment in the Office Action does not signify agreement with or concession of that rejection, issue or comment. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

If the Examiner has any comments or suggestions which could place this application in better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

DATE: March 11, 2008

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I hereby certify that this correspondence is being transmitted to the Patent and Trademark Office facsimile number 571-273-8300 on March 11, 2008. Number of Pages: 24

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